

GENERIC NAME:

TIROFIBAN

BRAND NAME: Aggrastat

CLASS: Antiplatelet agent, Platelet Aggregation Inhibitor

Mechanism of Action:

Reversibly binds with Glycoprotein (GP) IIb/IIIa receptors on the surface of platelets inhibiting the final common pathway for platelet aggregation. GP IIb/IIIa receptor blockade interferes with the binding of fibrinogen, von Willebrand factors and other platelet aggregation modulators to the surface of platelets thus preventing aggregation.

Indications for Field Use:

Infusion monitoring during interfacility transport only.

For the treatment of acute coronary syndrome, for patients to be managed medically or those undergoing percutaneous transluminal coronary angioplasty (PTCA) or atherectomy.

Heparin should be concurrently administered and monitored.

Contraindications:

Active internal bleeding or recent history (within 30 days) of clinically significant gastrointestinal or genitourinary bleeding
History of cerebrovascular accident (CVA) with current residual neurologic deficit or within the past 2 years
Bleeding diathesis (bleeding disorder, condition or predisposition)
Current use of warfarin (Coumadin) or use within the past 7 days unless prothrombin time is <1.2 times control
Thrombocytopenia (<100,000 cells/mcl)
Trauma or major surgery within the past 6 weeks
Intracranial neoplasm
Arteriovenous malformation, aneurysm or evidence of aortic dissection
Severe uncontrolled hypertension (systolic BP >180mmHg, diastolic BP >110mmHg)
History of vasculitis
Concomitant use of another GP IIb/IIIa inhibitor
Acute pericarditis
Hypersensitivity to tirofiban

Adverse Reactions:

Bleeding - spontaneous bleeding may occur with tirofiban administration; most common sites include: venous and arterial access sites (including femoral artery, retroperitoneal, gastrointestinal, genitourinary)

GD-061-PHS-EMS: Drug Profile for Tirofiban

Major bleeds have been demonstrated to occur more often in patients: >65 years old, <75kg, with a history of prior gastrointestinal disease, patients receiving thrombolytics or heparin

Hemorrhagic stroke and intracranial bleeding

Thrombocytopenia

Other adverse effects (incidence greater than 1 percent):

Cardiovascular - Bradycardia, Dissection of coronary artery, edema, swelling, vasovagal reaction

Central nervous system - dizziness, sweating, pain (leg and pelvic)

Notes on Administration:

Weight-based dosing of both tirofiban and concomitant heparin is essential to decrease the incidence of major and minor bleeding episodes. Patients should be managed following an accepted, literature-based standard of practice.

Infusion pump is required in management of tirofiban infusions.

Incompatibilities/Drug Interactions:

Other medication that effects hemostasis: thrombolytics, oral anticoagulants, aspirin and other nonsteroidal anti-inflammatory agents, dipyridamole, ticlopidine, clopidogrel.

Adult Dosage:

Standard Orders based on the PRISM-PLUS trial:
(N Engl J Med. May 21, 1998; 338: 1488-97.)

Loading Dose: 0.4mcg/kg/min for 30 minutes

Infusion: 0.1mcg/kg/min, for a minimum of 48 hours and 12 to 24 hours post angioplasty.

Standard Solution: 50mcg/ml NS or D5W 500ml

Pediatric Dosage:

Safety and efficacy in children have not been established.

Routes of Administration:

Intravenous bolus followed by infusion

Onset of Action:

A few minutes

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Peak Effects:

Early peak in less than 30 minutes, infusion steady state peak in approximately 6 hours.

Duration of Action:

Platelet function restores 4 to 8 hours after tirofiban infusion is discontinued

Dosage Forms/Packaging:

Injection - 250mcg/ml 50ml vials; premix 50mcg/ml 500m "IntraVia"

Arizona Drug Box Standard Supply:

Tirofiban is **not** to be stored or stocked in either the paramedic or intermediate drug box.

Special Notes:

Minimizing vascular and other trauma is important in managing platelet aggregation inhibitors. Due to risk of spontaneous bleeding during tirofiban administration, procedures including the following should be avoided whenever possible: arterial and venous punctures, intramuscular injection, placement of urinary catheters, nasogastric tube and nasotracheal intubation. If arterial or venous access is necessary, avoid non-compressible like subclavian and jugular vessels.

Patients transported with an tirofiban infusion should be under the direct care of a cardiologist who is responsible for initiating and monitoring the tirofiban therapy.

Inservice education of paramedic personnel is required prior to managing tirofiban during transport.